IN THE CLAIMS

Please cancel claims 3-5, 21 and 31-33 without prejudice.

Please amend claims 1, 14, 18-20, 23 and 30 as indicated below.

The listing of claims below will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A functionalized heparin-binding protein comprising a heparin-binding protein and at least one sugar chain covalently bonded thereto, wherein the at least one sugar chain is selected from the group consisting of a sulfated polysaccharide, a glycosaminoglycan, and an O-linked sugar chain, wherein the DNA synthesis promoting activity of the heparin-binding protein is increased by adding the at least one covalently bonded sugar chain, wherein the functionalized heparin-binding protein comprises the amino acid sequence of SEQ ID NO: 1, 17, 19, 21, 23 or 29 and wherein the at least one sugar chain is covalently bonded to a peptide at the N-terminal of SEQ ID NO: 1, 17, 19, 21, 23 or 29.

2. (Canceled)

3-5. (Canceled)

6. (Previously Presented) The functionalized heparin-binding protein of claim 1, wherein the at least one sugar chain is bonded to the heparin-binding protein at a site forming a turn in the secondary structure, or at a site at which addition of the sugar chain will not change the tertiary structure of said protein sufficiently to cause said protein to incur a loss of activity.

7-13. (Canceled)

14. (Currently Amended) A pharmaceutical composition containing the functionalized heparin-binding protein of ~~any one of claims 1 or 3-6~~ claim 1 or 6 as an active ingredient.

15-17. (Canceled)

18. (Currently Amended) A functionalized heparin-binding protein which comprises a heparin-binding protein functionalized by covalently bonding thereto at least one sugar chain, wherein the functionalized heparin-binding protein comprises the amino acid sequence of SEQ ID NO: 1, 17, 19, 21, 23 or 29, and wherein the at least one sugar chain is covalently bonded to a peptide at the N-terminal of SEQ ID NO: 1, 17, 19, 21, 23 or 29, which is covalently bonded to the heparin-binding protein to which the sugar chain is added thereby increasing the DNA synthesis promoting activity of the heparin-binding protein, said at least one sugar chain selected from the group consisting of a sulfated polysaccharide, a glycosaminoglycan, and an O-linked sugar chain~~, wherein the heparin-binding protein comprises the amino acid sequence of SEQ ID NO: 1, 17, 19, 21, 23 or 29~~.

19. (Currently Amended) A functionalized heparin-binding protein comprising a heparin-binding protein, comprising the amino acid sequence of SEQ ID NO: 1, 17, 19, 21, 23 or 29, and a plurality of sugar chains covalently bonded thereto, wherein the sugar chains are selected from the group consisting of a sulfated polysaccharide, a glycosaminoglycan, and an O-linked sugar chain, wherein the sugar chains are covalently bonded to a peptide at the N-terminal of said SEQ ID NO., which is covalently bonded to the heparin-binding protein to which the sugar chains are added thereby increasing the DNA synthesis promoting activity of the heparin-binding protein~~, wherein the heparin-binding protein comprises the amino acid sequence of SEQ ID NO: 1, 17, 19, 21, 23 or 29~~.

20. (Currently Amended) A functionalized heparin-binding protein comprising a heparin-binding protein comprising the amino acid sequence of SEQ ID NO: 1, 17, 19, 21, 23 or 29 and containing a peptide sequence at the N-terminal of said SEQ ID NO. to which at least one sugar chain is covalently bonded, wherein the heparin-binding protein is covalently bonded to the peptide sequence to which the at least one sugar chain is added, thereby increasing the DNA synthesis promoting activity of the heparin-binding protein, said at least one sugar chain selected from the group consisting of a sulfated polysaccharide, a glycosaminoglycan, and an O-linked sugar chain~~, wherein the heparin-binding protein comprises the amino acid sequence of SEQ ID NO: 1, 17, 19, 21, 23 or 29~~.

21. (Canceled)

22. (Canceled)

23. (Currently Amended) A functionalized heparin-binding protein which comprises a heparin-binding protein modified with covalently bonded sugar chains, the sugar chain being selected from the group consisting of a sulfated polysaccharide, a glycosaminoglycan, and an O-linked sugar chain, wherein the heparin-binding protein has improved stability over the unmodified proteins, wherein the functionalized heparin-binding protein comprises the amino acid sequence of SEQ ID NO: 1, 17, 19, 21, 23 or 29.

24. (Previously Presented) The functionalized heparin-binding protein of claim 1, wherein the at least one sugar chain is heparan sulfate.

25. (Previously Presented) The functionalized heparin-binding protein of claim 23, wherein the sugar chain is heparan sulfate.

26. (Previously Presented) The functionalized heparin-binding protein of claim 18, wherein the at least one sugar chain is heparan sulfate.

27. (Previously Presented) The functionalized heparin-binding protein of claim 19, wherein the at least one sugar chain is heparan sulfate.

28. (Previously Presented) The functionalized heparin-binding protein of claim 20, wherein the at least one sugar chain is heparan sulfate.

29. (Previously Presented) The functionalized heparin-binding protein of claim 23, wherein the stability is chosen from among the group consisting of thermostability, acid resistance, alkalai resistance and resistance to proteolytic enzymes.

30. (Currently Amended) A functionalized heparin-binding protein comprising a heparin-binding protein and at least one sugar chain covalently bonded thereto,

said at least one covalently bonded sugar chain being selected from the group consisting of a sulfated polysaccharide, a glycosaminoglycan and an O-linked sugar chain,

said heparin-binding protein comprising (a) a proteoglycan core protein or a part thereof, to which said sugar chain is bonded, and (b) ~~an amino acid sequence chosen from the group consisting of:~~ the portion of the amino acid sequence of SEQ ID NO: 1 starting with Asn at

number 88 and ending with Asp at number 221, ~~the portion of the amino acid sequence of SEQ ID NO: 17 starting with Asn at number 67 and ending with Asp at number 200, the portion of the amino acid sequence of SEQ ID NO: 19 starting with Asn at number 67 and ending with Asp at number 200, the portion of the amino acid sequence of SEQ ID NO: 21 starting with Asn at number 121 and ending with Asp at number 254, and the portion of the amino acid sequence of SEQ ID NO: 23 starting with Asn at number 148 and ending with Asp at number 281,~~

wherein the DNA synthesis promoting activity of the heparin-binding protein is increased by adding the at least one covalently bonded sugar chain.

31-33. (Canceled)

34. (Previously Presented) The functionalized heparin-binding protein of claim 30, wherein the at least one sugar chain is heparan sulfate.

35. (Previously Presented) The functionalized heparin-binding protein of claim 30, wherein the functionalized heparin-binding protein has improved stability over an unmodified heparin-binding protein.

36. (Previously Presented) The functionalized heparin-binding protein of claim 35, wherein the stability is chosen from among the group consisting of thermostability, acid resistance, alkalai resistance and resistance to proteolytic enzymes.

37. (Previously Presented) A pharmaceutical composition containing the functionalized heparin-binding protein of claim 30 as an active ingredient.